

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-3 (canceled)

Claim 4 (Currently amended): A method of forming a polyethylene pipe coupling including a bell end connection for a joint section of polyethylene pipe, the method comprising the steps of:

providing a rotatably driven mandrel having a substantially cylindrical end section corresponding to the internal diameter of a bell end connection to be formed, the mandrel having an outer cylindrical extent and an inner cylindrical extent, the mandrel having a locating area for an elastomeric gasket on an external surface thereof, the locating area forming a region of decreased external diameter on the otherwise substantially cylindrical end section of the mandrel;

positioning an elastomeric gasket on the external surface of the mandrel within the region of decreased external diameter at the locating area thereof, the locating area being between the inner and outer cylindrical extents of the mandrel;

forming a bell connection about the mandrel and suitably located gasket by extruding a heated melt profile made of polyethylene onto the mandrel beginning adjacent the inner extent of the mandrel and spirally winding the melt profile around the cylindrical end section of the mandrel and around the gasket such that adjacent windings of the melt profile make contact, passage of the spirally wound melt profile around the mandrel cylindrical inner extent, the region of decreased external diameter containing the elastomeric gasket, and the mandrel cylindrical outer extent serving to locate the elastomeric gasket within a gasket receiving groove of a desired shape;

cooling the bell connection thus formed to thereby maintain the desired shape of the gasket receiving groove and secure the elastomeric gasket within the gasket receiving groove so formed;

removing the bell connection and gasket from the mandrel;

whereby a pre-stressed and pre-located integral gasket is provided within the bell connection which is securely retained within the gasket receiving groove, the bell connection being integrally formed about the gasket during manufacture : ; and

installing a mating male section of polyethylene pipe within an end opening of the bell connection, the mating section of polyethylene pipe having an exterior surface, the pre-stressed and pre-located integral gasket forming a sealing surface with respect to the mating male pipe section in making up the polyethylene pipe coupling.

Claim 5 (Currently amended): A method of forming a polyethylene pipe coupling including ~~in~~ a bell end connection for a ~~joint~~ section of polyethylene pipe, the method comprising the steps of:

providing a rotatably driven mandrel having a substantially cylindrical end section corresponding to the internal diameter of a bell end connection to be formed, the mandrel having an outer cylindrical extent and an inner cylindrical extent, the mandrel having a locating area for an elastomeric gasket on an external surface thereof, the locating area forming a region of decreased external diameter on the otherwise substantially cylindrical end section of the mandrel;

positioning an elastomeric gasket on the external surface of the mandrel within the region of decreased external diameter at the locating area thereof, the locating area being between the inner and outer cylindrical extents of the mandrel;

forming a bell connection about the mandrel and suitably located gasket by extruding a heated melt profile made of polyethylene onto the mandrel beginning adjacent the inner extent of the mandrel and spirally winding the melt profile around the cylindrical end section of the mandrel and around the gasket such that adjacent windings of the melt profile make contact, passage of the spirally wound melt profile around the mandrel cylindrical inner extent, the region of decreased external diameter containing the elastomeric gasket, and the mandrel cylindrical outer extent serving to locate the elastomeric gasket within a gasket receiving groove of a desired shape;

terminating the extruding step while continuing to rotate the mandrel;

spraying cooling water over the bell end connection thus formed to thereby maintain the desired shape of the gasket receiving groove and secure the elastomeric gasket within the gasket receiving groove so formed;

cutting a free end of the connection with a rotating knife; ~~and~~

removing the bell end connection and integral gasket from the mandrel;

whereby a pre-stressed and pre-located integral gasket is provided within the bell connection which is securely retained within the gasket receiving groove, the bell connection being integrally formed about the gasket during manufacture : ; and

installing a mating male section of polyethylene pipe within an end opening of the bell connection, the mating section of polyethylene pipe having an exterior surface, the pre-stressed and pre-located integral gasket forming a sealing surface with respect to the mating male pipe section in making up the polyethylene pipe coupling.

Claim 6 (canceled)

Claim 7 (original): The method of claim 5, wherein the mandrel is heated to at least about 100 degrees C. before the melt profile is extruded.

Claim 8 (original): The method of claim 5, further comprising the step of subjecting the extruded melt profile to a weak mechanical loading by means of a rotating roll for intensifying a welding-together of the contacting melt profile windings.

Claim 9 (previously amended): The method of claim 5, wherein the rotating knife comprises a freely rotating circular blade which is pressed against the polyethylene of the bell end connection for cutting the free end of the connection.

Claim 10 (original): The method of claim 5, further comprising the steps of:

removing the bell connection from the mandrel by blowing pressurized air between the mandrel and the connection while directly pushing the connection in a direction opposite the mandrel.

Claim 11 (original): The method of claim 10, further comprising the step of:

electrowelding the thus formed bell connection onto a generally cylindrical length of thermoplastic pipe.